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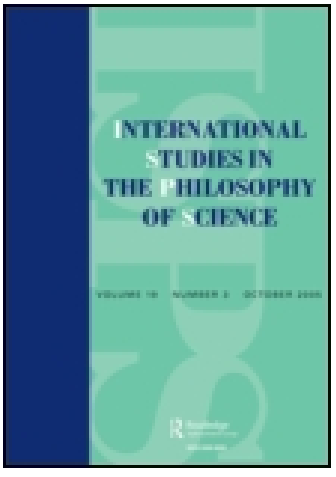

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Kant's Organicism: Epigenesis and the Development of Critical Philosophy

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Book Reviews

Kant's Organicism: Epigenesis and the Development of Critical Philosophy
Jennifer Mensch
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In the last decades it has become common practice to interpret Kant's theoretical philosophy in relation to the sciences of his day. After Michael Friedman published his seminal *Kant and the Exact Sciences* (1992), most scholars recognized that in order to understand Kant's critical philosophy one must carefully consider his lifelong attempts to provide philosophical foundations of the (natural) sciences. Kant's views on science are often analysed by considering his discussions of mathematics, physics, and, more recently, his reflections on chemistry (Friedman's 'exact sciences'). In addition, many historians of philosophy and science have stressed Kant's engagement with disciplines such as history, physical geography, and anthropology. Kant's philosophy of biology has also received a lot of attention in recent years. There are now multiple monographs and articles that highlight Kant's interaction with the eighteenth-century life sciences.

In spite of the strong interest in Kant's views on biology, the status of biology within his philosophy remains problematic. Kant has been criticized for excluding biology from the realm of science. After all, he denied that there could be a Newton of a blade of grass. It is also not clear how Kant's views on biology are related to his critical philosophy, partly because Kant did not provide a detailed account of his views on the foundations of biology. In light of such problems, historians of science such as Robert Richards and John Zammito have argued that biology does not fit in Kant's philosophy of science.

Jennifer Mensch's *Kant's Organicism* provides a novel assessment of the place of the life sciences in Kant's critical philosophy. The main thesis of the book is that Kant's reflections on biology are crucial to his transcendental philosophy. This thesis is argued for in a twofold way. First, Mensch provides a rich historical account of developments in the life sciences that influenced Kant during his intellectually formative years. Drawing on a large amount of philosophical and scientific literature, including Kant's published writings, correspondence and *Nachlass*, she shows how Kant's engagement with the life sciences shaped his philosophical development up to the publication of the *Critique of Pure Reason* (1781/1787). Second, Mensch argues that epigenetic theories of organic generation shaped Kant's theory of cognition as

articulated in the first *Critique*. By arguing that Kant's *epistemological* reflections must be understood against the background of eighteenth-century biology, Mensch attempts to show that biology is a central part of Kant's critical system as a whole, even if it is not a proper science for Kant.

In the first two chapters, Mensch provides a historical overview of philosophical and biological debates that form the backdrop to Kant's interests in the life sciences. Chapter 1 is devoted to seventeenth-century debates, and discusses, among other things, Locke's views on organic generation and taxonomy as well as Leibniz's endorsement of the pre-existence theory of generation. Turning to the eighteenth century, chapter 2 covers Buffon's Newtonian views on the scientific method, his explanation of reproduction in terms of organic molecules, internal moulds, and penetrating forces, Maupertuis's accounts of embryogenesis, and Buffon's attempt to reframe natural history as a historical and explanatory science.

Chapter 3 exploits the results of the first two chapters by documenting how some of the key figures and topics treated in these chapters influenced Kant's early writings. It shows that cosmological theories of Maupertuis and Buffon informed Kant's cosmogony contained in his *Universal Natural History* of 1755, and that Buffon's *Natural History* provided the model for Kant's lectures on physical geography of 1757. In addition, Buffon and Maupertuis are shown to have shaped Kant's discussion of biological origin in *The Only Possible Argument* of 1763, as well as his views on hylozoism formulated in the *Dreams of a Spirit-Seer* (1766). The discussion of Kant's precritical writings is crisp and clear, and Mensch persuasively argues that eighteenth-century naturalists significantly impacted Kant's early philosophical development.

In the remaining chapters, which document Kant's philosophical development up to the *Critique of Pure Reason*, Mensch develops her core argument. Chapter 4 is devoted to Kant's Inaugural Dissertation (1770) and the famous letter to Herz of 1772, in which Kant announces his 'Critical Turn'. The chapter nicely highlights Kant's focus on investigations into the *origin* of cognitions in these writings. Rejecting Leibniz's innatism, according to which—to use the biological analogy—ideas preexist or lie preformed in the mind, as well as Locke's empiricist account of the origin of ideas, Kant treated the concepts of space and time and the pure concepts of the intellect as 'originally acquired' concepts generated by the mind itself (78). The model for this account of the origin of concepts, Mensch argues, was epigenesis, a theory Kant used to expound his views on the *generation* of cognition. Just as the theory of epigenesis stressed the self-formative nature of organism, so, similarly, Kant stressed that pure intellectual concepts are novel products formed by reason understood as a spontaneous and organizing faculty.

Chapter 5 treats some of Kant's writings in the period from 1770 to 1781 and contains an instructive comparison of Kant's 1775 essay on race and theories of biological variation proposed by Maupertuis and Buffon. Chapter 6 analyses Kant's metaphysics lectures and his reception of Tetens's *Essays on Human Nature* (1777). It shows that the study of Tetens's psychological work led Kant to explicate the difference between investigations into the origin of cognition and *transcendental* investigations into the presuppositions of knowledge. Nevertheless, questions concerning the origin of

cognition remained central to Kant's philosophy, as is shown in chapter 7. This chapter focuses on the *Critique of Pure Reason*. It aims to establish that Kant's transcendental investigations into the presuppositions of knowledge are based on what Mensch calls *genealogical* investigation into the origin of cognitions. To support this claim, Kant's transcendental deduction and his deduction of the ideas of reason are interpreted as arguments that necessarily involve accounts of the genesis of categories and ideas. The book ends with an epilogue that summarizes some key aspects of Kant's views on natural history, a 20-page bibliography, and a convenient index.

I thoroughly enjoyed reading *Kant's Organicism*. It is the result of thorough scholarship and Mensch's attempt to interpret Kant's transcendental philosophy in relation to the eighteenth-century life sciences is original and exciting. My main criticism of the book is that, at times, its main thesis is insufficiently supported by close analyses of Kant's technical arguments in the first *Critique*. Let me give one example to illustrate this point: Mensch's discussion of Kant's deduction of the ideas of reason ('soul', 'world', and 'God'). Mensch correctly stresses that Kant wished to explain the genesis of these transcendent ideas. However, in the *Critique of Pure Reason* Kant argues that the origin of the ideas of reason can be traced to the form of *syllogisms* studied in logic. By relating, in a murky and much debated way, the ideas of 'soul', 'world', and 'God' to the forms of categorical, hypothetical, and disjunctive syllogisms, Kant argues that these ideas are grounded in the nature of reason. If this is the case, one may expect that a proper understanding of Kant's views on the origin of ideas requires a study of the eighteenth-century *logic*. It is not immediately clear what a study of eighteenth-century biology and epigenesis adds to our understanding of Kant's deduction of the ideas of reason. Since Mensch does not discuss Kant's technical argument in detail, I was, at least in this case, not persuaded by her claim that Kant's use of biological models had a 'deep methodological impact' on his transcendental philosophy and constitute more than a merely 'metaphorical appeal' (144).

Notwithstanding this criticism, *Kant's Organicism* is a very welcome addition to Kant scholarship. The book is concise, well written, and, generally speaking, Mensch nicely explains complex theories and arguments in very elegant prose. She is at her best as an intellectual historian. I was impressed with the historical scholarship and the way in which she meticulously demonstrates the extensive impact of eighteenth-century naturalists on Kant's philosophical development. Finally, Mensch convincingly shows that questions concerning the origin of cognitions strongly informed Kant's philosophy. This result is important, since many scholars, often operating in the wake of Peter F. Strawson's analytic Kant interpretation, have ignored these type of questions when studying Kant. In short: Mensch's book is a good example of the fruitful integration of Kant studies with history of science.

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